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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)	
BERNARDO ET AL.)	Examiner: S. C. PATHAK
)	
Serial No. 09/747,786)	Art Unit: 2634
)	
Confirmation No: 7621)	
)	
Filing Date: DECEMBER 22, 2000)	
)	
For: ROBUST COMMUNICATION SYSTEM)	
FOR TRANSMISSIONS IN A NOISY)	
ENVIRONMENT)	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Office Action of July 22, 2005,
and in connection with the Notice of Appeal filed concurrently
herewith, please consider the remarks set out below.

REMARKS

Claims 9-32 remain pending in the application.
Favorable reconsideration of the rejections is respectfully
requested.

Claims 9-32 were rejected in view of Abarbanel et
al. (U.S. Patent No. 5,923,760) in various combinations with
non-patent citation J. Lee et al. (Secure Communication Using
chaos, IEEE Global Telecommunications Conference), Cutler et
al. (U.S. Patent No. 5,847,960), Applicants' background
discussion, Giacomini (U.S. Patent No. 6,016,078) and/or
Brenman et al. (U.S. Patent No. 4,590,942) for the reasons set

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forth on pages 2-15 of the final Office Action. Applicants contend that Claims 9-32 clearly define over the cited references, and in view of the following remarks, favorable reconsideration of the rejections under 35 U.S.C. §103 is requested.

Consistent with USPTO policy regarding Pre-Appeal Brief Requests for Review, Applicants maintain that there is a clear deficiency in the prima facie case in support of the rejection, as the Examiner omitted an essential element needed for a prima facie rejection.

More specifically, the Examiner failed to show proper motivation for making a modification in the obviousness rejection (35 U.S.C. 103) because the chaotic modulator in the transmitter of Abarbanel et al. is substantially identical to the corresponding demodulator in the receiver, and the secure communication system in Lee et al. does not require synchronization of the receiver to the transmitter because the power level of the dynamic error of each data stream is compared. In other words, the references clearly teach away from the use of an incoherent discriminator in the system of Abarbanel et al. for receiving the modulated signal from the transmission channel.

As discussed in the previous response, the Abarbanel et al. patent discloses a communication system in which a chaotically generated signal is modulated using a transmitter chaotic signal generator 20. After transmission, the received signal is applied to a receiver chaotic signal generator 30, and the chaotic signal is recovered. The chaotic signal is used to demodulate the received signal for recovery of information. As correctly acknowledged by the Examiner, the

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Abarbanel et al. system does not include an incoherent discriminator as claimed.

The Examiner relied upon the Lee reference as allegedly teaching the use of an incoherent receiver in a chaotic communication system. The Examiner has characterized the power level comparison of the dynamic error of the data streams in Lee as meeting the feature of an incoherent receiver. Furthermore, the Examiner asserts that it would then be obvious to combine such a feature of Lee with the system of Abarbanel et al. to arrive at the claimed invention. However, the combination of references fails to produce the claimed invention, and the Examiner is using impermissible hindsight reconstruction to selectively combine the disjointed prior art references in an attempt to produce the claimed invention in a manner that is not fairly taught or suggested by the prior art.

Indeed, Abarbanel et al. does not include an incoherent discriminator for receiving the modulated digital signal from the transmission channel because the chaotic modulator in the transmitter is substantially identical to the corresponding demodulator in the receiver. In other words, the system of Abarbanel et al. teaches away from the use of an incoherent discriminator for receiving the modulated signal from the transmission channel.

The Lee et al. article discloses a secure communication system using a chaotic system. The secure communication system in Lee et al. does not require synchronization of the receiver to the transmitter because the power level of the dynamic error of each data stream is compared.

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The Examiner cited Culter et al. as disclosing a low-pass filter, Giacomini as disclosing a null-threshold comparator, and Brenman et al. as disclosing a divider. However, none of these references makes up for the deficiencies of Abarbanel et al. and Lee references as discussed above.

As the Examiner is aware, to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. The initial burden is on the Examiner to provide some suggestion of the desirability of doing what the Applicants have done. To support the conclusion that the claimed invention is directed to obvious subject matter, either the reference must expressly or impliedly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the reference. Both the suggestion to make the claimed combination and the reasonable expectation of success must be founded in the prior art and not in Applicants' disclosure.

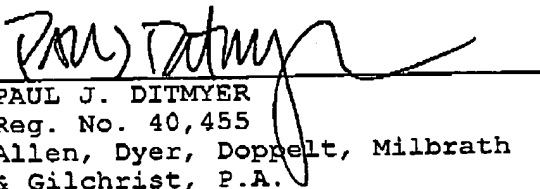
There is simply no teaching or suggestion in the cited references to provide the combination of features as claimed. Accordingly, for at least the reasons given above, Applicants maintain that the Examiner has not established a prima facie case of obviousness as the cited references do not disclose or fairly suggest the invention as set forth in Claims 1, 17, 21 and 25. Furthermore, no proper modification of the teachings of these references could result in the

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invention as claimed. Thus, the rejections under 35 U.S.C.
§103(a) should be withdrawn.

In view of the foregoing remarks, it is respectfully
submitted that the present application is in condition for
allowance. An early notice thereof is earnestly solicited.
If, after reviewing this Response, there are any remaining
informalities which need to be resolved before the application
can be passed to issue, the Examiner is invited and
respectfully requested to contact the undersigned by telephone
in order to resolve such informalities.

Respectfully submitted,


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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has
been forwarded via facsimile number 703-872-9306 to the
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-
1450 this 24th day of October, 2005.

